VITALS/MEASUREMENTS
USER MANUAL

Version 4.0

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Preface

This manual has been developed for clinical staff for the purpose of describing the implementation and use of the Vitals/Measurements application. The content covers: software implementation, site configurable file maintenance, on-line documentation, functional use of each option, menu access, and prototype screen displays.

The content of this manual was prepared under the auspices of the multi-disciplinary Nursing Focus Group that provided the applications developers with functional specifications.

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Introduction

The Vitals/Measurements application is designed to store in the patient's electronic medical record all vital signs and various measurements associated with a patient's hospital stay or outpatient clinic visit. Data can be accessed by several VISTA (Veterans Health Information Systems and Technology Architecture) applications (e.g., Health Summary, Pharmacy) that interface with the Vitals/Measurements application.

Functionality:

- Supports documentation of a patient's vital signs (e.g., temperature, pulse, and respiration).
- Tracks a patient's height, weight, central venous pressure (CVP), circumference/girth and oxygen saturation via oximetry with supplemental oxygen information.
- Supports documentation of detailed or positional blood pressures for a patient (i.e., bilateral blood pressures taken in a sitting, standing and lying position).
- Associates qualifiers (alpha characters appended to the measurement's numeric value) to provide a more detailed description of the patient's vitals/measurements.
- Contains detailed help screens to assist users in associating appropriate qualifiers with the patient vitals/measurements.
- Permits users to add site specific qualifiers that can be viewed on edit displays.
- Prints temperature, height, weight, CVP and circumference/girth in both metric equivalents and U.S. customary units.
- Prints a patient's Body Mass Index (BMI) which is calculated by dividing the person's weight in kilograms by the square of his height in meters.
- Prints patient's cumulative measurements on the Vitals Flow Sheet (SF511) and the Cumulative Vitals Report.
- Displays latest information on all of the patient's vitals/measurements in both metric equivalents and U.S. customary units along with the date/time the information was obtained.
- Prints an expanded vitals graphic report which includes the patient's intake and output when present in the patient's database (refer to the Intake and Output application).

- Prints blood pressure graphic reports.
- Interfaces with the Nursing software to display data on various nursing reports including the End of Shift Report.
- Interfaces with the Order Entry/Results Reporting and the Computerized Patient Record System (CPRS) to support ordering of vital signs and other measurements.
- Allows facilities to establish hospital-wide high and low values for each vital sign or measurement
- Identifies abnormal patient values on vitals/measurements reports (those values outside the high and low range).
- Prints the following patient measurements in a linear graphic report format:
  Temperature and pulse.
  Blood pressure.
  Weight.
  Pulse oximetry and respiration.
- Audiometry, fundal height, fetal heart tones, head circumference, hearing, tonometry, vision corrected and vision uncorrected measurements are added to the GMRV Vital Type (#120.51) file for use by the Patient Care Encounter (PCE) application.
- Prints a Vitals Category/Qualifier Table that lists all vital types (e.g., temperature, pulse) and their associated categories (e.g., location, site, method), and qualifiers (e.g., oral, tympanic, radial) used in the application.
- Supports facility specific defaults for temperature and pulse.
- Supports the archiving and purging of patient measurements, that are no longer required on the production account, through FileMan.
- Supports multiple changing of documentation parameters (e.g., date/time taken, vitals signs/measurements combination, and patient/location combination) through the Vitals/Measurements Data Entry option without leaving the menu.
- Interfaces with Health Summary and passes all patient vitals/measurements information within a specific date range.
- Records a reason for the omission of a patient's vitals/measurements.
- Allows the entry of multiple Quick Order protocols with a single vital type.

Section 1 Package Management

Chapter 1 Implementation and Maintenance

Description:

This chapter provides guidelines for implementing the Vitals/Measurements application. It is important to complete all of the steps contained in this chapter before assigning menu options to clinical staff.

Virgin Installation of Software:

The following steps should be followed when the Vitals/Measurements software is installed in an environment where no previous installation of the Vitals/ Measurements application has taken place.

1. Setting up the software environment.

Information Resource Management Service (IRMS) staff should install the software using the Installation Guide in a test environment prior to installing the software in the production (VAH) account. The following V*IST*A packages should reside in the environment where the Vitals/Measurements application is to be installed:

a. VA FileMan V. 21 or greater,
b. Kernel V. 8.0 or greater,
c. Kernel Toolkit V. 7.3 or greater,
d. PIMS (MAS) V. 5.3 or greater,
e. Intake and Output V. 4.0,
f. Health Summary V. 2.7 or greater.
g. If you are using Order Entry/Results Reporting (OE/RR), V. 2.5 or greater, the Administration Schedule (#51.1) file of Inpatient Medications V. 4.5 or greater must be installed.

The Vitals/Measurements software must be installed before the Nursing V. 4.0 application can be installed because specific Nursing V. 4.0 options are dependent upon the Vitals/ Measurements routines. Data entered into the test environment CANNOT be transferred into the production environment. It is recommended that a limited amount of data be entered into the test directory in order for the user to become familiar with the application and to establish an acceptable training data base.

2. Name spacing and file listing.

Vitals/Measurements is found in the GMRV namespace. All routines, templates and options begin with GMRV. File numbers are in the range of 120.5 to 120.57 and are stored in the ^GMR and ^GMRD globals.

3. Editing site configurable files.

   a. The Edit Vitals Site Parameter File option edits the GMRV Vitals Parameters (#120.57) file.

   b. The Enter/Edit Vitals Qualifiers option edits the GMRV Vital Qualifier (#120.52) file.

   c. The Display Vitals Category/Qualifier Table option displays the GMRV Vital Category (#120.53) file.

   d. The Edit Administration Schedules File option edits the Administration Schedule (#51.1) file.

   e. The Create Vital Measurement Quick Order Protocol option edits the Protocol (#101) file.

Review the above populated site configurable files. Files (a) through (c) are used in the screen displays associated with editing patient vitals/measurements. Files (d) and (e) must be populated if OE/RR V. 2.5 is implemented at your facility. The options which allow the application coordinator to edit the file's data are all located in the GMRV Manager Menu (i.e., Vitals/Measurements Site File Menu, (option 4)). Refer to Vitals/Measurements User Manual, Chapter 2 for additional information.

4. Queueing TaskMan jobs

No queued TaskMan jobs are associated with this application.

5. Accessing menus

There is a separate set of similar menu options in both Vitals/Measurements and Nursing applications. The Vitals/Measurements software identifies a patient's hospital location by using the Hospital Location (#44) file. The Nursing software hooks into the Vitals/Measurements software and uses the Nursing Location (#211.4) file. In the Nursing package, Vitals/Measurements is found under Patient Care Data, Enter/Edit. Vitals/Measurements includes: Vitals/Measurement Data Entry and Edit a Vitals/Measurements Entered in Error. Vitals/ Measurements Results Reporting is found under Patient Care Data, Print.

6. Assigning menus.

The GMRV menu contains the following menus or options:

```
Select OPTION NAME:  GMRVMGR            Vitals/Measurement

     1   Vitals/Measurement Data Entry ...
     2   Vitals/Measurements Results Reporting ...
     3   Edit a Vital/Measurement Entered in Error
     4   Vitals/Measurements Site Files Menu ...
```

Clinical staff should be assigned options 1 through 3. Option 4 should be assigned to the Vitals/Measurements application coordinator. The Vitals/Measurements Site Files menu is also found under the Clinical Site File Functions menu, in the Nursing Application.

7. Printer issues.

The application's reports were designed to be used with the Kyocera F-800A laser printers, HP LaserJet III printers, and the HP LaserJet 4 printers, but they can also be printed on dot matrix printers. When using a programmable graphic laser printer the setups need to be checked, to insure the correct format on the printed page.

The following special printer setup is for Kyocera type printers:

a. Ensure the existence of a Kyocera entry in the Terminal Type file. This device compresses print and has a margin width of 132 characters. This entry may be exported by Kernel, or you may have to set up your own entry.

   1) The Name (#.01) field should begin with the characters P-KYOCERA e.g., P-KYOCERA-P16. This is important as the software will not recognize the device as a Kyocera printer if this Terminal Type entry is not set up properly.

   2) The Right Margin (#1) field must be 132.

b. Create a Device file entry for the Kyocera printer.

   1) The Name (#.01) field should contain the word KYOCERA. This isn't required, but will make selection of this device by users easier.

   2) Sub-Type (#3) field should point to a Terminal Type entry that fits the characteristics defined above in (a-1).

   3) Margin Width (#9) field should be 132.

c. In the Kyocera printer, PRESCRIBE Macro Buffer Size (H0)=99.
   To reprogram your printer,

   1) Type: `!R! RES; FRPO H0, 99; EXIT;` on your terminal/input device.

   2) Print this code on your Kyocera printer (using appropriate print commands at the device prompt). This may be done through a mail message.

3) Turn off the printer for a few seconds, then place the printer back on line (by turning it on). The printer will then be ready to print the linear graphic reports (e.g., SF511).

The following special printer setup is for HP LASERJET III, HP LASERJET 4 and HP LASERJET 5 printers:

a. Ensure the existence of a HP LASERJET entry in the Terminal Type file. This device compresses print and has a margin width of 132 characters. This entry may be exported by Kernel, or you may have to set up your own entry.

1) The Name (#.01) field should begin with the characters P-HPLASER e.g., P-HPLASER-L180. This is important as the Vitals/Measurements software will not recognize the device as an HP LASERJET printer if this Terminal Type entry is not set up properly.

2) The Right Margin (#1) field must be 132.

b. Create a Device file entry for the HP LASERJET printer.

1) The Name (#.01) field should contain the word HPLASER. This isn't required, but will make selection of this device by users easier.

2) Sub-Type (#3) field should point to a Terminal Type entry that fits the characteristics defined above in (b-1).

3) Margin Width (#9) field should be 132.

4) Suppress Form Feed at Close (#11.2) field should be set to YES.

Note: If the printer is not set up correctly, it will effect the printed output. KYOCERA and HPLASER are key words in the routine to identify which printer is being used, and IRMS must edit the Device file so the word KYOCERA or HPLASER appears in the name of the device (e.g., KYOCERA-PORT).

Non-Virgin Installation of Software:

Follow steps 1 through 8 above when installing the software in an environment where a previous version of the application has been installed.

Implementation Considerations:

Some sites prefer to delay implementation of the software until they have a point of care data entry system, but this software can be implemented without a point of care system. Vital sign entry can be accomplished by ancillary service personnel, (e.g., MAS, Dietetics, Pharmacy). Interested users of this software are encouraged to form a committee to work cooperatively on the implementation and training of the software. Setting up test wards is a good way to begin a cooperative implementation effort. The Vitals/Measurements module is appropriate for all personnel who obtain and record patient vitals/measurements. Conceivably this module could be used by nursing, dietetics, medicine, and other disciplines as appropriate.

You may want to involve the Clinical Executive Committee in the review of the Vital Site Parameter file. This facilitates station wide agreement on what the abnormal values will be. It also encourages physician use of the software.

Resource Requirements:

The minimal hardware requirements for the software are two CRTs and one printer per location. In addition to this, the following statistics regarding the disk storage requirements of the software were compiled by the Alpha/Beta test sites.

Globals	Type of Data	Size
DDs		40 k
GMR	Patient data for the Text Generator, Vitals/Measurements and Intake and Output Modules	25-75 k/ patient
GMRD	Static data for the Text Generator, Vitals/Measurements and Intake and Output Modules	10 k depending on the global efficiency

Chapter 2 Maintenance of Site Files

GMRVMGR

Vitals/Measurement

Description:

This is the main menu for the Vitals/Measurements application. It contains options for: (1) entering patient Vitals/Measurements data, (2) printing various vitals/measurements reports, (3) editing site configurable files. Patient data is stored in the GMRV Vital Measurement (#120.5) file.

Additional Information:

Option 4, Vitals/Measurements Site Files Menu, should be assigned to the application coordinator and/or designee. Content of these files should be coordinated across clinical services.

Menu Display:

```
Select OPTION NAME:  GMRVMGR             Vitals/Measurement

     1   Vitals/Measurement Data Entry ...
     2   Vitals/Measurements Results Reporting ...
     3   Edit a Vital/Measurement Entered in Error
     4   Vitals/Measurements Site Files Menu ...
```

Menu Access:

The Vitals/Measurement menu is the main menu.

GMRV SITE FILE MENU

Vitals/Measurements Site Files Menu

Description:

The ADP Coordinator can use the options contained in this menu to enter:

1. Vitals sign site parameters in the GMRV Vital Type (#120.51) file.
2. Vitals/measurements qualifiers in the GMRV Vital Qualifier (#120.52) file.
3. Temperature and pulse default qualifiers in the GMRV Category (#120.53) file.
4. Standard times when vitals are to be taken (ordered) in the Administration Schedule (#51.1) file.
5. Quick order protocols in the Protocol (#101) file.

This menu also prints:

1. Administration schedules associated with vitals/measurements.
2. A table displaying all vital types and their associated categories and qualifiers.

Additional Information:

The following options are specific to OE/RR V. 2.5 package implementation:

Edit Administration Schedules File
Display Administration Schedule File
Create Vital Measurement Quick Order Protocol

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Menu Access:

The Vitals/Measurements Site Files Menu is accessed through the Vitals/ Measurement menu.

GMRV SITE FILE EDIT

Edit Vitals Site Parameter File

Description:

This option allows the ADP coordinator, and selected staff, to edit the vital sign site parameters data including the abnormal patient measurement ranges. Site parameter data is stored in the GMRV Vitals Parameters (#120.57) file.

Additional Information:

This is one of the first files you want to review. Depending on your facility you may or may not have direct access to this file. The file contains pre-set high and low values for each vital measurement. These values can be changed to meet your facilities needs. The file also allows you to set a STOP DATE DEFAULT for a vital sign order, and CANCEL a vital sign order on ward transfer or service transfer of the patient. This stop date default and cancellation information is used in OE/RR V. 2.5.

The information of high and low values for the vital measurement parameters in this file is used in the following options:

1. Vitals/Measurement Data Entry
2. Vitals/Measurements Results Reporting
3. Edit a Vital/Measurement Entered in Error.

An asterisk (*) following any displayed patient value indicates that the value is abnormal. The abnormal high is equal to or greater than the upper limit entered in the abnormal high field. The abnormal low is equal to or lower than the lower limit set in the abnormal low field.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 1  Edit Vitals Site
Parameter File
```

```
Select GMRV VITALS PARAMETERS NAME: HOSPITAL
```

This field cannot be edited and it is the only entry that can appear in the name field of the Vitals Site Parameter file.

```
STOP DATE DEFAULT: 7// <RET>
```

Enter a hospital-wide stop date default for Vitals/Measurements. This field is used in OE/RR V. 2.5.

```
CANCEL ON WARD TRANSFER: NO// <RET>
```

This field controls the cancellation or continuation (in OE/RR V. 2.5) of a patient's ordered vitals upon a interward transfer. Answer 'yes' or 'no'.

```
CANCEL ON SERVICE TRANSFER: NO// <RET>
```

This field controls the cancellation or continuation (in OE/RR V. 2.5) of a patient's ordered vitals upon a interservice transfer. Answer 'yes' or 'no'.

The following fields allow the facility to define abnormal patient measurement ranges. A patient's abnormal measurement values are tagged by an asterisk (*) on all vitals measurements reports. The numeric values displayed before the double slash (//) are exported with the package.

```
ABNORMAL TEMPERATURE - HIGH: 102// <RET>
```

Enter abnormal high temperature.

```
ABNORMAL TEMPERATURE - LOW: 95// <RET>
```

Enter abnormal low temperature.

```
ABNORMAL PULSE - HIGH: 100// <RET>
```

Enter abnormal high pulse.

```
ABNORMAL PULSE - LOW: 60// <RET>
```

Enter abnormal low pulse.

```
ABNORMAL RESPIRATION - HIGH: 30// <RET>
```

Enter abnormal high respiration.

```
ABNORMAL RESPIRATION - LOW: 8// <RET>
```

Enter abnormal low respiration.

```
ABNORMAL SYSTOLIC - HIGH: 210// <RET>
```

Enter abnormal high systolic.

```
ABNORMAL DIASTOLIC - HIGH: 110// <RET>
```

Enter abnormal high diastolic.

```
ABNORMAL SYSTOLIC - LOW: 100// <RET>
```

Enter abnormal low systolic.

```
ABNORMAL DIASTOLIC - LOW: 60// <RET>
```

Enter abnormal low diastolic.

```
ABNORMAL CVP - HIGH: 25// <RET>
```

Enter abnormal high central venous pressure. Type a number between -10 and 100, 1 decimal digit.

```
ABNORMAL CVP - LOW: 12// <RET>
```

Enter abnormal low central venous pressure. Type a number between -10 and 100, 1 decimal digit.

```
ABNORMAL O2 SATURATION - LOW: 60// <RET>
```

Enter abnormal low oxygen saturation. Type a number between 0 and 100, 0 decimal digits.

Menu Access:

The Edit Vitals Site Parameter File option is accessed through the Vitals/ Measurements Site Files Menu of the Vitals/Measurement menu.

GMRV VMQUALTY

Change Default Qualifiers for Temp./Pulse

Description:

This option is for the ADP coordinator to change hospital-wide default qualifiers for temperature and pulse. The default information is stored in the GMRV Vital Category (#120.53) file.

Additional Information:

The exported default for temperature is oral and for pulse, the default is radial. In a future release, the Vitals/Measurements Focus Group has requested the defaults be location based (i.e., wards, nursing units, clinics).

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 2  Change Default
Qualifiers for Temp./Pulse

TEMPERATURE has the following location qualifiers:

1  AXILLARY
2  CORE
3  ORAL
4  RECTAL
5  SKIN
6  TYMPANIC
```

To change the temperature default from oral to tympanic, the coordinator enters the number '6' behind the //. If no change in the default is required, enter <RET> behind the //.

```
Enter a number for TEMPERATURE default qualifier
or ^ to quit or @ to delete: ORAL// 6   TYMPANIC
```

```
PULSE has the following location qualifiers:

1  APICAL
2  BILATERAL PERIPHERALS
3  BRACHIAL
4  CAROTID
5  DORSALIS PEDIS
6  FEMORAL
7  OTHER
8  PERIPHERAL
9  POPLITEAL
10  POSTERIOR TIBIAL
11  RADIAL
12  ULNAR
```

Enter an appropriate default qualifier for PULSE or <RET> to retain the present default.

```
Enter a number for PULSE default qualifier
or ^ to quit or @ to delete: RADIAL// <RET>
```

Menu Access:

The Change Default Qualifiers for Temp./Pulse option is accessed through the Vitals/Measurements Site Files Menu of the Vitals/Measurement menu.

GMRV VMSITE

Enter/Edit Vitals Qualifiers

Description:

This option is used by the application coordinator to create and edit hospital-wide qualifiers associated with vital signs and other patient measurements captured in the Vitals/Measurements application. Data is stored in the GMRV Vital Qualifier (#120.52) file.

Additional Information:

Qualifiers describe how patient vital signs and miscellaneous measurements were taken. These package qualifiers are categorized by location (e.g., right arm, left leg), position (e.g., lying, sitting, standing), method (e.g., cuff, Doppler, auscultate, assisted ventilator, T-piece), site (e.g., right, left), quality (e.g., actual, estimated), and cuff size (e.g., adult, small adult, pediatric). For your convenience, we have provided a report that lists the current vital types and their associated categories and qualifiers found in the Vitals/Measurements application. This report can be printed by running the Display Vitals Category/Qualifier Table option in the Vitals/Measurements Site Files Menu.

Restrictions:

A new qualifier category cannot be entered into the software by the package coordinator. New qualifier categories also cannot be associated with a different vital type without a software patch issued by the developer. Please note, that once a qualifier is associated with a category of a vital type, it cannot be deleted, ONLY edited.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 3  Enter/Edit Vitals
Qualifiers
```

```
Enter/Edit Vital qualifiers for:

1. B/P   2. Pulse   3. Resp.   4. Temp.   5. Weight   6. Circum/Girth
7. Pulse Ox.  8. Height
```

The following is an example of setting up the software to identify and document that oxygen was administered when the pulse oximetry reading was taken. This is probably the most difficult relationship identified in the software. As you review other V/M entries, you will note that the category/qualifier relationships are more logically understood.

```
Select a number of vital type: 7  PULSE OXIMETRY
```

Enter the number of the vital type you wish to edit.

```
1. METHOD
```

Enter the number of the qualifier category you wish to enter/edit. Since only one category is listed, enter '1'.

```
Select the number of the qualifier category for PULSE OXIMETRY that you want
to enter/edit: 1
```

In this next step, the package coordinator associates the device (delivery method) used to administer the oxygen by typing the name of the vital qualifier, Venturi mask.

```
PULSE OXIMETRY has the following METHOD qualifiers:
     AEROSOL/HUMIDIFIED MASK
     FACE TENT
     MASK
     NASAL CANNULA
     NON RE-BREATHER
     PARTIAL RE-BREATHER
     T-PIECE
     TRACHEOSTOMY COLLAR
     VENTILATOR
Enter a Vital Qualifier: VENTURI MASK

  Are you adding 'VENTURI MASK' as
    a new GMRV VITAL QUALIFIER (the 66TH)? No//  Y  (Yes)
QUALIFIER: VENTURI MASK// <RET>          PO2
```

The list of all qualifiers associated with the method category for pulse oximetry is re-displayed.

```
PULSE OXIMETRY has the following METHOD qualifiers:
     AEROSOL/HUMIDIFIED MASK
     FACE TENT
     MASK
     NASAL CANNULA
     NON RE-BREATHER
     PARTIAL RE-BREATHER
     T-PIECE
     TRACHEOSTOMY COLLAR
     VENTILATOR
     VENTURI MASK
```

```
Enter a Vital Qualifier: <RET>
```

At this prompt you may enter <RET> to return to the main menu, enter additional category (method) related qualifiers associated with the vital type, or edit existing qualifiers, but no qualifiers may be deleted.

Menu Access:

The Enter/Edit Vitals Qualifiers option is accessed through the Vitals/ Measurements Site Files Menu of the Vitals/Measurement menu.

GMRV CAT/QUAL TABLE

Display Vitals Category/Qualifier Table

Description:

This option displays a list of categories and qualifiers associated with individual vital types (e.g., blood pressure, temperature, pulse, respirations, weight, circumference/girth and pulse oximetry). Data comes from the GMRV Vital Qualifier (#120.52) file and the GMRV Vital Category (#120.53) file.

Additional Information:

Qualifiers describe how patient vital signs and miscellaneous measurements were taken. These package qualifiers are categorized by location (e.g., right arm, left leg), position (e.g., lying, sitting, standing), method (e.g., cuff, Doppler, auscultate, assisted ventilator, T-piece), site (e.g., right, left), quality (e.g., actual, estimated), and cuff size (e.g., adult, small adult, pediatric). Data displayed in this report can be updated by the application coordinator through the Enter/Edit Vitals Qualifiers option in the Vitals/Measurements Site Files Menu.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 4 Display Vitals
Category/Qualifier Table
```

DEVICE: Enter appropriate device (This report must be queued when sent to a printer.)

Vitals/Measurements Categories/Qualifiers Table Page 1

Qualifiers for BLOOD PRESSURE:

LOCATION	POSITION	METHOD	CUFF SIZE
L ARM	LYING	CUFF	ADULT
L LEG	SITTING	DOPPLER	LG ADULT
R ARM	STANDING	NON-INVASIVE	PEDIATRIC
R LEG		PALPATED	SM ADULT
			THIGH

Qualifiers for PULSE:

LOCATION	SITE	METHOD	POSITION
APICAL	LEFT	AUSCULTATE	LYING
BILATERAL PERIPHERALS	RIGHT	DOPPLER	SITTING
BRACHIAL		PALPATED	STANDING
CAROTID			
DORSALIS PEDIS			
FEMORAL			
OTHER			
PERIPHERAL			
POPLITEAL			
POSTERIOR TIBIAL			
RADIAL			
ULNAR			

Qualifiers for RESPIRATION:

METHOD	POSITION
ASSISTED VENTILATOR	LYING
CONTROLLED VENTILATOR	SITTING
SPONTANEOUS	STANDING

Qualifiers for TEMPERATURE:

LOCATION
AXILLARY
CORE
ORAL
RECTAL
SKIN
TYMPANIC

Qualifiers for WEIGHT:

QUALITY	METHOD
ACTUAL	BED
DRY	CHAIR
ESTIMATED	STANDING

```
Vitals/Measurements Categories/Qualifiers Table                  Page 2
------------------------------------------------------------------------------

Qualifiers for CIRCUMFERENCE/GIRTH:

LOCATION          SITE
--------          ----
ABDOMINAL         LEFT
ANKLE             RIGHT
CALF
HEAD
LOWER ARM
OTHER
THIGH
UPPER ARM
WRIST

Qualifiers for HEIGHT:

QUALITY
-------
ACTUAL
ESTIMATED

Qualifiers for PULSE OXIMETRY:

METHOD
------
AEROSOL/HUMIDIFIED MASK
FACE TENT
MASK
NASAL CANNULA
NON RE-BREATHER
PARTIAL RE-BREATHER
T-PIECE
TRACHEOSTOMY COLLAR
VENTILATOR
VENTURI MASK
```

Menu Access:

The Display Vitals Category/Qualifier Table option is accessed through the Vitals/Measurements Site File Menu option of the Vitals/Measurement menu.

GMRV SCHED FILE DISP

Display Administration Schedule File

Description:

This option displays entries in the Administration Schedule (#51.1) file which are associated with the Vitals/Measurement application. Administration schedules related to other VISTA packages do not display.

Additional Information:

The Display Administration Schedule File option prints information on a single, standard schedule associated with this package's measurements. A full report of schedules associated with this package cannot be printed.

This option only displays information to the screen; data cannot be sent to a printer. The data displayed through this option was entered through the Edit Administration Schedules File option found in the Vitals/Measurements Site Files Menu.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 6  Display Administration
Schedule File

Select STANDARD SCHEDULE: QID      10-14-18

  Schedule: QID                                          Type: CONTINUOUS
  Standard Admin Times: 10-14-18

  Location: 2AS
  Admin Times:
```

Menu Access:

The Display Administration Schedule File option is accessed through the Vitals/Measurements Site File Menu option of the Vitals/Measurement menu.

GMRV SCHED FILE EDIT

Edit Administration Schedules File

Description:

This option permits the entering and editing of entries into the Administration Schedule (#51.1) file by the Vitals/Measurements application coordinator and/or the OE/RR application coordinator. This file ties the Vitals/Measurements application into the OE/RR Order File V. 2.5. It allows you to enter "hospital standard" (default) administration times for vital measurements and location specific administration times.

Additional Information:

When a location does not specify vitals ordered, BID might be taken at 0600 and 1600 according to "your hospital standard". If a vital measurement was missed it would be noted on the vitals report. If you are not using OE/RR, this file does not need to be edited. There is an option, Display Administration Schedule File, [GMRV SCHED FILE DISP], that shows you what times are associated with a single administration schedule. This option should be disabled when a facility is not using the OE/RR application.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

```
Select Vitals/Measurements Site Files Menu Option: 5  Edit Administration
Schedules File
```

Enter an appropriate administration schedule. This is a common abbreviation for a schedule. A schedule is the frequency for which an action is to take place, such as every eight hours (Q8H), every other day (QOD), or every Monday, Wednesday, Friday (MO-WE-FR).

```
Select ADMINISTRATION SCHEDULE: QOD

NAME: QOD// <RET>
```

```
TYPE OF SCHEDULE: CONTINUOUS// <RET>
```

Enter type of schedule.

The TYPE OF SCHEDULE determines how the schedule will be processed or when an action should occur. The following is a list of choices used to define this field, refer to the following explanations and examples for clarification of listed terminology.

C	CONTINUOUS
D	DAY OF THE WEEK
DR	DAY OF THE WEEK-RANGE
O	ONE-TIME
R	RANGE
S	SHIFT

A CONTINUOUS schedule occurs on a regular basis, such as 'three times a day' or 'once every two days'.

A DAY OF THE WEEK schedule occurs only on specific days of the week. This type of schedule should have admin times entered with it. If not, the start time of the order is used as the admin time. Whenever this type is chosen, the name of the administration schedule must be in the form of 'MO-WE-FR'.

A DAY OF THE WEEK-RANGE schedule occurs only on specific days of the week, but at no specific time of day (no admin times). Whenever this type is chosen, the name of the schedule must be in the form of 'MO-WE-FR'.

A ONE-TIME schedule occurs once only at a specific date and time.

A RANGE schedule occurs within a given date range.

A SHIFT schedule occurs within a given range of times of day.

```
STANDARD ADMINISTRATION TIMES: 0600
```

Enter a time of day, or a set of times. All times must be the same length (2 or 4 characters), must be separated by dashes ("-"), and be in ascending order (e.g., 0600-1400-2000). The entry in the field is from 2 to 119 characters in length.

```
FREQUENCY (IN MINUTES): 2880// <RET>
```

If the above field appears, it may be left blank. The Vitals/Measurements software does not use data stored in this field.

```
Select HOSPITAL LOCATION: 5 EAST    Individual unit associated with the schedule.
   Are you adding '5 EAST' as a new HOSPITAL LOCATION (the 1ST for this
ADMINISTRATION SCHEDULE)? No// YES
```

Answer with the hospital location for which this administration schedule is applicable. If this field is left blank, the next field appearing is MAX DAYS FOR ORDERS.

```
ADMINISTRATION TIMES: 0900
```

The administration time for the ward may be different than the standard administration time.

```
Select HOSPITAL LOCATION:<RET>
```

You may enter another location.

```
MAX DAYS FOR ORDERS: <RET>
```

Enter maximum number of days continuous orders will last for this administration schedule. (For Vitals orders this field should be left blank.)

```
Select ADMINISTRATION SCHEDULE: <RET>
```

You may enter another administration schedule.

Menu Access:

The Edit Administration Schedules File option is accessed through the Vitals/ Measurements Site Files Menu of the Vitals/Measurement menu.

GMRVORQUICK

Create Vital Measurement Quick Order Protocol

Description:

This option allows users to create and edit quick order protocols. The user can choose whether the quick order will display prompts with default values, or not display prompts and have the default values automatically entered. Protocol data is stored in the Protocol (#101) file, (OE/RR V. 2.5).

Additional Information:

A quick order protocol is created by using one or a combination of vital types that have been entered in the Protocol file. These vital types are listed with the quick order protocols when the user enters a '?' at the 'Select Protocol to be added as a Quick Protocol' prompt. The user may enter multiple protocols for each vital type. Each quick order protocol entered is preceded by the word 'quick' which is added by the software. This option should be disabled when a facility is not using the OE/RR application.

Menu Display:

```
Select Vitals/Measurement Option: 4  Vitals/Measurements Site Files Menu


   1      Edit Vitals Site Parameter File
   2      Change Default Qualifiers for Temp./Pulse
   3      Enter/Edit Vitals Qualifiers
   4      Display Vitals Category/Qualifier Table
   5      Edit Administration Schedules File
   6      Display Administration Schedule File
   7      Create Vital Measurement Quick Order Protocol
```

Screen Prints:

Example: Creation of a quick order protocol for taking a pulse BID.

```
Select Vitals/Measurements Site Files Menu Option: 7  Create Vital Measurement
Quick Order Protocol
```

The package coordinator selects a vital type protocol (i.e., temperature, pulse, pulse oximetry).

```
Select PROTOCOL to be added as a QUICK PROTOCOL: PULSE
```

Since a BID Pulse quick order protocol is being created, Pulse was entered.

```
DO YOU WANT TO ADD PULSE AS A QUICK ORDER PROTOCOL? YES// <RET>  (YES)
```

Answer with protocol item text. The following is a sample list of choices:

```
  B/P       B/P
  CENTRAL VENOUS PRESSURE       CENTRAL VENOUS PRESSURE
  HEIGHT       HEIGHT
  PULSE       PULSE
  PULSE OXIMETRY       PULSE OXIMETRY
  RESPIRATION       RESPIRATION
  TEMPERATURE       TEMPERATURE
  TPR       TPR
  TPR B/P       TPR B/P
  TPR-B/P-HT.-WT.       TPR-B/P-HT.-WT.
  WEIGHT       WEIGHT
```

```
These are the Vital Measurement Quick Order Questions:

   1. START/Date
   2. STOP/Date
   3. Administrative Schedule
   4. Special Instructions
Select the question(s) that require special action:  (1-4): 1-4
```

Enter the number of the question(s) that require special action.

Example: Setting the start date to the present date and time.

```
Choose one of the following:
     1. Ask START/Date with a DEFAULT value
     2. Automatically Enter START/Date
Select 1,or 2: 2
Enter default value: NOW  (OCT 18, 1993@12:50)
```

Example: Automatically setting the stop date of the order.

```
Choose one of the following:
     1. Ask STOP/Date with a DEFAULT value
     2. Automatically Enter STOP/Date
Select 1,or 2: 2
Enter default value: NOW+7  (OCT 25, 1993@12:50)
```

Example: Setting an administrative schedule with a default value that was entered through the Edit Administration Schedules File option.

```
Choose one of the following:
     1. Ask Administrative Schedule with a DEFAULT value
     2. Automatically Enter Administrative Schedule
Select 1,or 2: 1
Schedule: BID      0800-2000
```

This prompt sets a default value for the comments field to "none".

```
Choose one of the following:
     1. Ask Special Instructions with a DEFAULT value
     2. Automatically Enter Special Instructions
Select 1,or 2: 1
```

```
Enter default value: NONE

ITEM TEXT: QUICK BID PULSE// <RET>
```

Example: Editing a quick order protocol.

```
Select Vitals/Measurements Site Files Menu Option: 7  Create Vital Measurement
Quick Order Protocol
```

Answer with protocol item text. The following is a sample list of choices:

```
  B/P       B/P
  CENTRAL VENOUS PRESSURE       CENTRAL VENOUS PRESSURE
  HEIGHT       HEIGHT
  PULSE       PULSE
  QUICK BID PULSE       QUICK BID PULSE
  PULSE OXIMETRY       PULSE OXIMETRY
  RESPIRATION       RESPIRATION
  TEMPERATURE       TEMPERATURE
  TPR       TPR
  TPR B/P       TPR B/P
  TPR-B/P-HT.-WT.       TPR-B/P-HT.-WT.
  WEIGHT       WEIGHT
```

```
Select PROTOCOL to be added as a QUICK PROTOCOL: QUICK TID TPR

These are the Vital Measurement Quick Order Questions:

   1. START/Date
   2. STOP/Date
   3. Administrative Schedule
   4. Special Instructions
Select the question(s) that require special action:  (1-4): 1-4
```

Edit the number of the question(s) that require special action.

Example: Setting the start date to the present date and time.

```
Choose one of the following:
     1. Ask START/Date with a DEFAULT value
     2. Automatically Enter START/Date
Select 1,or 2: 2
Enter default value: NOW// <RET>  (OCT 18, 1993@12:50)
```

Example: Automatically setting the stop date for the order.

```
Choose one of the following:
     1. Ask STOP/Date with a DEFAULT value
     2. Automatically Enter STOP/Date
Select 1,or 2: 2
Enter default value: NOW+7// N+5  (OCT 23, 1993@12:50)
```

Example: Setting an administrative schedule with a default value.

```
Choose one of the following:
     1. Ask Administrative Schedule with a DEFAULT value
     2. Automatically Enter Administrative Schedule
Select 1,or 2: 1
Schedule: TID// <RET>
```

Example: Sets a default value for the comments field.

```
Choose one of the following:
     1. Ask Special Instructions with a DEFAULT value
     2. Automatically Enter Special Instructions
Select 1,or 2: 1
Enter default value: NONE// <RET>
```

The next prompt allows the user to edit the text (or name) or the quick order. Some facilities have removed the word 'quick' from the text.

```
ITEM TEXT: QUICK TID TPR// <RET>
```

Menu Access:

The Create Vital Measurement Quick Order Protocol option is accessed through the Vitals/ Measurements Site Files Menu of the Vitals/Measurement menu.

Section 2 Package Operation

Chapter 3 Package Operation

Having completed the instructions for implementing the software as indicated in Package Management, Section 1, you are now ready to use the options. The content contained in the following sections provides information on all software options which can be assigned to patient services staff. This information includes the name, description or purpose of the option, screen prints, menu access, and other information that supports the use of the options.

Remember that on-line help is available when questions arise. The user can type ? or ??, after any prompt to get a help message that generally tells the user what to do. In some instances, a specific list of possible responses is displayed. All field names in the Vitals/Measurements application have descriptions associated with them. Help is also available at the menu level by typing a ??, ???, or ?OPTION.

Chapter 4 Enter/Edit Vitals/Measurements

GMRV V/M ENTRY MENU

Vitals/Measurement Data Entry

Description:

This option permits users to enter different types of patient vitals signs and selected measurements into the clinical patient record system. Vitals/Measurements data is stored in the GMRV Vital Measurement (#120.5) file.

Additional Information:

Data can be retrieved through any of the Vitals/Measurements Results Reporting menu options. If data was entered in error, the user can correct the misinformation through the Edit a Vitals/Measurements Entered in Error option.

Patient vital signs can be entered by patient, selected room and bed and by ward location (i.e., Hospital Location (#44) file). When vitals are entered, both a date and a time are required as well as hospital location. Vital signs and other patient measurements are documented in the specific order indicated by the vital type (temperature, weight, pulse oximetry). Data representing each vital type entry is also separated by a hyphen: Temp-Pulse-Resp-B/P-Height-Weight. To omit entering a vital/measurement reading:

Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for omission.
Enter a single * to document that all measurements were omitted and the reason for omission.

The software supports the documentation of measurement omissions by displayig three reasons (i.e., unavailable, pass, and refused) when an '*' is entered for a measurement value.

Qualifiers (alpha characters appended to the measurement's numeric value) are used to provide additional information about the vital sign(s) and measurements taken by the clinician. Qualifiers are grouped by categories such as: location (e.g., right arm, left leg), position (e.g., lying, sitting, standing), method (e.g., cuff, Doppler, auscultate, assisted ventilator, T-piece), site (e.g., right, left), quality (e.g., actual, estimated), and cuff size (e.g., adult, small adult, pediatric). Vital types can be printed by category with their associated qualifiers through the Display Vitals Category/Qualifier Table option. When documenting patient vital signs and measurements, the user may see a listing of valid qualifiers by entering a '?' or '??'. The application coordinator has the ability to add qualifiers and change other software parameters through the Vitals/Measurements Site Files Menu option.

Note: After entering vitals/measurements information for a patient, the software displays this data and asks you, "Is this correct? YES//". The user must answer YES to store the data after it is verified correct. If the user enters an '^' at the prompt, the application does NOT store the data and displays 'DATA DELETED' on the screen. Of course, if NO is entered after the prompt, patient information is NOT stored and all vitals/measurements data must be re-entered.

Defaults: The software has defaults for each vital/measurement except for blood pressure. These defaults are displayed when the clinician validates the measurements entered. The following list summarizes the software's defaults:

Temperature - Oral
Pulse - Radial
Respirations - Spontaneous
Height - Actual
Weight - Actual

A application coordinator can change the temperature and pulse defaults through the Change Default Qualifiers for Temp./Pulse option. The user must enter the scale (U.S. customary unit or metric equivalent) associated with the weight and height.

Asterisks have two different meanings in the software.

1. When entering vitals/measurements information, the '*' can be used to "tell" the software that a reason for an omitted value must be entered by the user. The Vitals/Measurements software then displays a list of reasons from which the user may select.

2. When an '*' appears in a screen display (or report) appended to a vitals/ measurement entry, the value of the measurement is either higher or lower than the acceptable value defined in the GMRV Vitals Parameters (#120.57) file. These file values can be edited by the package coordinator through the Edit Vitals Site Parameter File option.

All patient measurements are stored in the U.S. Customary System in File #120.5 and displayed in both U.S. customary units and metric equivalents. Small discrepancies between the entering and displaying of data is due to the conversion between scales.

Temperature scales are automatically defined by the software when a user does not append a 'F' or a 'C' to the numeric entry. A number that is larger than or equal to 45 will be considered as a Fahrenheit temperature, and any number less than 45 will be considered as a Centigrade temperature.

The scales for weight and height cannot be automatically calculated. Therefore the user is required to enter a U.S. Customary unit (pounds (L) or kilograms (K)) or metric equvalent (inches (I), or ' for feet and " for inches) and centimeters (C).

Menu Display:

```
Select OPTION NAME:  GMRVMGR            Vitals/Measurement

     1   Vitals/Measurement Data Entry ...
     2   Vitals/Measurements Results Reporting ...
     3   Edit a Vital/Measurement Entered in Error
     4   Vitals/Measurements Site Files Menu ...
```

Screen Prints:

```
Select Vitals/Measurement Option: 1  Vitals/Measurement Data Entry
ENTER DATE (TIME Required) VITALS WERE TAKEN: T@8  (APR 04, 1993@08:00)
```

The first prompt is a system parameter used to identify the date/time the vitals/ measurements were taken; time is required. The date/time is stamped on every vital/measurement that is entered into the system. The Change Date/Time Taken option allows the user to identify a new date/time the measurements were taken, a different vital type or a new selection of patients without leaving the Vitals/ Measurement Data Entry menu. This option is further explained later in this chapter.

```
   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken

Select Vitals/Measurement Data Entry Option: 1  TPR
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
```

Example: Process for entering vitals for an individual patient:

Enter patient name.

```
Select PATIENT NAME: PARKER,PETER P.          --          500-1     YES
  SC VETERAN
```

Enter appropriate hospital location.

```
Select Hospital Location: 4E// <RET>

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.
```

The temp-pulse-resp are entered at this prompt.

```
Temp-Pulse-Resp: 102.1-70-24
```

The following is representative of the software's on-line help:
** Temperature: a number + a location qualifier(optional), e.g., 99.6A
or 99.6AX (F AXILLARY) or 37R (C RECTAL).
Default: ORAL
AXILLARY, CORE, ORAL, RECTAL, SKIN, TYMPANIC
** Pulse: a number + a location qualifier(optional), e.g., 70A or 70AP
(70 APICAL).
Default: RADIAL
APICAL, BILATERAL PERIPHERALS, BRACHIAL, CAROTID, DORSALIS PEDIS, FEMORAL, OTHER, PERIPHERAL, POPLITEAL, POSTERIOR TIBIAL, RADIAL, ULNAR
** Respiration: a number(0-99 with no decimal places) + method qualifier
(optional) e.g., 40C or 40c.
Default: SPONTANEOUS
ASSISTED VENTILATOR, CONTROLLED VENTILATOR, SPONTANEOUS
The entry should be in the following format:
TTT.T-PPP-RR
To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for omission.
Enter a single * to document that all measurements were omitted and the reason for omission.

The data entry is one single string of alphanumeric characters with each measurement separated by a hyphen (-). The software redisplays the data as:

```
Temp.: 102.1 F  (38.9 C)* ORAL
Pulse: 70 RADIAL
Resp.: 24 SPONTANEOUS
```

Note the asterisk (*) following the value for temperature. An asterisk (*) following data indicates that the value is higher or lower than the acceptable values which are defined in the site configurable file GMRV Vitals Parameters (#120.57).

```
Is this correct? YES// <RET>
```

At this point the user can reject or accept the entry. This is the last chance to change any possible errors during data entry. The user is able to correct errors at a later time using the error correction option (Edit a Vital/Measurement Entered in Error) which will be discussed later in this chapter.

```
Do you want to enter other V/M data for this patient? No// <RET>  (No)

Select PATIENT NAME: <RET>
```

This option also supports entering patient vital signs and measurements for all patients on a ward or unit and by selected hospital rooms on a unit. Navigating through the software to document measurements for all patients on a unit is described next.

```
   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken

Select Vitals/Measurement Data Entry Option: 1  TPR
```

Select the measurement(s) you want to enter.

Example: Entering vitals for all of the patients on a particular unit.

```
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? A
```

Enter the appropriate ward/unit name.

```
Select Unit: SICU

Begin entering patient vitals.

YGAFO,PAUL E          550-1  OK? YES// <RET>
```

The clinician may enter patient information in the format described for the individual patient or bypass an entry by entering <RET>. The software indicates that no data was entered. The name of the next patient is displayed.

```
Temp-Pulse-Resp : <RET>

NO DATA ENTERED

Do you wish to stop looping through names? YES// N  (NO)
```

When the clinician enters a NO behind the patient's name, he may continue to the next patient by answering NO to the question 'Do you wish to stop looping through names?', or exit by entering YES.

```
KJER,JAMES E          550-2  OK? YES// N  (NO)

KCCK,GEORGE R          560-1  OK? YES// <RET>  (YES)

Temp-Pulse-Resp : 100.2R-60A-34C
```

```
     Temp.: 100.2 F  (37.9 C) RECTAL
     Pulse: 60* APICAL
     Resp.: 34* CONTROLLED VENTILATOR
Is this correct? YES// <RET>

GEVFCC,MICHAEL E          560-10  OK? YES// N  (NO)
Do you wish to stop looping through names? YES// <RET>  (YES)
Enter return to continue <RET>


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken

Select Vitals/Measurement Data Entry Option: 3  TPR B/P, Ht and Wt.
```

Example: Entering vital signs by selecting specific beds. The software prompts for entering information is identical with the previous two pathways, i.e., entering data by patient or by unit.

```
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? S

Select Unit: SICU
```

Enter appropriate ward location.

```
Ward SICU has the following rooms:

1.    550-1
2.    550-2
3.    550-3
4.    550-4
5.    560-1
6.    560-10
7.    560-2
8.    570-1

Select the NUMBER(S) of the rooms: 5-6
```

Enter room or range of rooms to enter patient vitals.

```
Begin entering patient vitals.

KCCK,GEORGE R          560-1  OK? YES// <RET>
```

The software loops through the patients located in Rooms 560-1 and 560-10 and the user enters the vitals/measurements values.

```
1       TPR
2       TPR B/P
3       TPR B/P, Ht and Wt.
4       TPR, B/P and Wt.
5       Temp, Detailed PR and B/P
6       Detailed B/P and Associated Pulse
7       Pulse
8       Weight
9       Circumference/Girth
10      Pulse Oximetry
11      CVP (Central Venous Pressure)
12      User Configurable Combination
13      Change Date/Time Taken
```

Example: Entering detailed B/P and associated pulse.

```
Select Vitals/Measurement Data Entry Option: 6  Detailed B/P and
Associated Pulse
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
Select PATIENT NAME:    PARKER,PETER P.         --          500-1     YES
   SC VETERAN

Select Hospital Location: 4E// <RET>   4E

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.

BP-Pulse: 120/70-60
```

The software displays selections for documenting detailed blood pressures. Each qualifier must be separated by a comma. The user is not required to enter qualifiers to proceed to the next prompt.

```
Qualifiers for BLOOD PRESSURE:

LOCATION          POSITION          METHOD               CUFF SIZE

1 L ARM           5 LYING           8 CUFF               12 ADULT
2 L LEG           6 SITTING         9 DOPPLER            13 LG ADULT
3 R ARM           7 STANDING        10 NON-INVASIVE      14 PEDIATRIC
4 R LEG                             11 PALPATED          15 SM ADULT
                                                         16 THIGH

Select a number under each category (optional).
Separate the numbers with ',' : 1,6,8
  L ARM  SITTING  CUFF
```

The software displays selections for documenting detailed pulse.

```
Qualifiers for PULSE:

 SITE             METHOD             POSITION

 1 LEFT           3 AUSCULTATE       6 LYING
 2 RIGHT          4 DOPPLER          7 SITTING
                  5 PALPATED         8 STANDING


Select a number under each category (optional).
Separate the numbers with ',' : 1
  LEFT

  B/P: 120/70   L ARM  SITTING  CUFF
  Pulse: 60* RADIAL  LEFT
Is this correct? YES// <RET>
```

After reviewing the user can reject or accept the entry. This is the last chance to change any possible errors during data entry. The user is able to correct errors at a later time using the error correction option, Edit a Vital/Measurement Entered in Error, which will be discussed later in this chapter.

```
Enter another B/P? NO// <RET>
```

If YES is entered, the user can enter another B/P and pulse under the same time for a different position, location, etc..

```
   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

Example: Girth measurement.

```
Select Vitals/Measurement Data Entry Option: 9  Circumference/Girth
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
Select PATIENT NAME:    PARKER,PETER P.         --          500-1     YES
   SC VETERAN

Select Hospital Location: 4E// <RET>
```

```
To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.
```

The following is representative of the software's on-line help:

** Circumference: a number + 'I' or 'C' (2 decimals allowed)
For example: 72.25I (inches) 147C (centimeters)
The entry should be in the following format:
NNN.NN

```
Circumference/Girth: 32.25I

Qualifiers for CIRCUMFERENCE/GIRTH:

LOCATION          SITE

1 ABDOMINAL       10 LEFT
2 ANKLE           11 RIGHT
3 CALF
4 HEAD
5 LOWER ARM
6 OTHER
7 THIGH
8 UPPER ARM
9 WRIST
```

The user identifies the type of circumference.

```
Enter a number under each category, separate numbers with a ','
DO NOT select SITE if this is a HEAD/ABDOMINAL girth measurement: 1
  ABDOMINAL

  Circumference/Girth: 32.25 IN (81.92 CM)   ABDOMINAL
Is this correct? YES// Y
```

Example: Circumference of left lower arm.

```
To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.

Circumference/Girth: 12.25I

Qualifiers for CIRCUMFERENCE/GIRTH:

LOCATION          SITE

1 ABDOMINAL       10 LEFT
2 ANKLE           11 RIGHT
3 CALF
```

```
4 HEAD
5 LOWER ARM
6 OTHER
7 THIGH
8 UPPER ARM
9 WRIST


Enter a number under each category, separate numbers with a ','
DO NOT select SITE if this is a HEAD/ABDOMINAL girth measurement: 5,10
  LOWER ARM  LEFT

  Circumference/Girth: 12.25 IN (31.12 CM)   LOWER ARM  LEFT
Is this correct? YES// <RET>


Do you want to enter other V/M data for this patient? No// <RET>  (No)


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

Example: Pulse Oximetry.

```
Select Vitals/Measurement Data Entry Option: 10  Pulse Oximetry
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
Select PATIENT NAME:    PARKER,PETER P.         --          500-1     YES
   SC VETERAN
```

Answer with patient name.

```
Select Hospital Location: 4E// <RET>   4E
```

Enter appropriate hospital location.

```
To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.
```

The following is representative of the software's on-line help:
** Pulse Oximetry: Enter the numeric value of the patients O2 saturation obtained via pulse oximetry. The value will be interpreted as a percentage.
The entry should be in the following format:
NNN

```
PO2: 89
```

At this prompt the user may indicate that patient was receiving oxygen at the time the pulse oximetry reading was taken. If YES is entered, additional information on the flow rate, O2 concentration, and method of O2 administration can be entered.

```
Is the patient on supplemental oxygen? Yes// <RET>  (Yes)
```

Enter a number between 0.5-20 for liters/minute, and/or 21-100 for percent of oxygen concentration. If you wish to enter both rates, separate the values with a ','.

```
Enter the numeric value(s) for amount of supplemental oxygen provided
(Separate values with a ',') : 3.5,40

Oxygen is supplied by

     1 AEROSOL/HUMIDIFIED MASK
     2 FACE TENT
     3 MASK
     4 NASAL CANNULA
     5 NON RE-BREATHER
     6 PARTIAL RE-BREATHER
     7 T-PIECE
     8 TRACHEOSTOMY COLLAR
     9 VENTILATOR
     10 VENTURI MASK
Enter a number: 1

  Pulse Ox.: 89 % with supplemental O2 40% 3.5 l/min
                     via AEROSOL/HUMIDIFIED MASK
Is this correct? YES// <RET>


Do you want to enter other V/M data for this patient? No// <RET>  (No)


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

Example: Central Venous Pressure (CVP).

```
Select Vitals/Measurement Data Entry Option: 11  CVP (Central Venous
Pressure)
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
Select PATIENT NAME:    PARKER,PETER P.         --          500-1     YES
   SC VETERAN

Select Hospital Location: 4E// <RET>   4E

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.
```

The following is representative of the software's on-line help:
** Central venous pressure: a number for cmH2O measurement or a number + 'G' for mmHg measurement (1 decimal allowed).
A negative number can be entered up to and including -13 cmH2O or -9.6 mmHg.
The entry should be in the following format:
NN

```
CVP: 14G

  CVP: 19.04 cmH2O (14.0 mmHg)
Is this correct? YES// <RET>


Do you want to enter other V/M data for this patient? No// <RET>  (No)


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

Example: User Configurable Combination.

```
Select Vitals/Measurement Data Entry Option: 12  User Configurable
Combination
```

This option allow the users to create their own vital signs and measurements combination(s). Although these selections display all prompts that suppport documentation of detailed measurements, the user can bypass these prompts.

```
Select the combination of Vitals/Measurements you want to enter.

1  T
2  P
3  R
4  B/P
5  Wt
6  Ht
7  Circumference/Girth
8  Pulse Oximetry
```

Data on weight and height is documented on a patient.

```
Select from 1 to 9 (enter 1,3-5 etc.) or ^ to exit: 5,6
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or
(P)atient? P
Select PATIENT NAME:    PARKER,PETER P.         --          500-1     YES
   SC VETERAN

Select Hospital Location: 4E// <RET>

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for
omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.
```

The following is representative of the software's on-line help:
** Weight: a number+L(l) or a number+K(k) + 2nd quality (optional) 2 decimals allowed, e.g., 120.25L or 120l (pounds),
45.25K or 45k (kilograms).
120L, 120LA, or 120K for actual weight.
Default: ACTUAL
ACTUAL, DRY, ESTIMATED
** Height: a number + ',' + qualifier (2 decimals allowed)
72I (inches) 147C or 147CM (centimeters)
5F10I;E or 5FT10IN;E or 5'10";E (for 5 feet 10 inches ESTIMATED)
Default: ACTUAL
ACTUAL, ESTIMATED
The entry should be in the following format:
WWW.WW-HH

```
Ht.-Wt.: 5'6";E-165.25LE

Qualifiers for WEIGHT:

 METHOD

 1 BED
 2 CHAIR
 3 STANDING
```

The user may enter a method indicating how the weight was taken or enter <RET> to display, and the then validate data.

```
Select a number under each category (optional).
Separate the numbers with ',' : 1
  BED

  Wt.: 165.25 LB  (75.11 KG) ESTIMATED  BED
  Ht.: 5 FT 6 IN (167.64 CM) ESTIMATED
Is this correct? YES// <RET>


Do you want to enter other V/M data for this patient? No// <RET>  (No)


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

Example: Change Date Time Taken.

```
Select Vitals/Measurement Data Entry Option: 7  Pulse
```

When information is entered using the All patients on a unit or the Selected Rooms on a unit pathway, the user may enter new data with out exiting and re-entering the option by selecting (13) Change Date/Time Taken. This option prompts for a new date/time measurements were taken, a different vital type, and a new selection of patients. As an example, the user documents 6 am pulse readings for 2AS patients, then enters the Change Date/Time Taken option and documents 8 am weights.

```
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? A
Select Unit: 2AS
Begin entering patient vitals.

ANESMJS,ESTELL H            OK? YES// <RET>

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.

Pulse: 86
```

```
Qualifiers for PULSE:

 SITE             METHOD             POSITION

 1 LEFT           3 AUSCULTATE       6 LYING
 2 RIGHT          4 DOPPLER          7 SITTING
                  5 PALPATED         8 STANDING

Select a number under each category (optional).
Separate the numbers with ',' : 1,3,7
  LEFT  AUSCULTATE  SITTING

  Pulse: 86 RADIAL  LEFT  AUSCULTATE  SITTING
Is this correct? YES// <RET>
                  .
                  .
                  .
```

The user continues to enter 6 am pulse readings, until he selects the Change Date/Time Taken option to enter 8 am weights.

```
Do you wish to stop looping through names? YES//<RET>
Enter return to continue <RET>


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

At the next prompt, the user enters, 13, to enter another date/time, new vital types and select patient(s).

```
Select Vitals/Measurement Data Entry Option: 13  Change Date/Time Taken
ENTER DATE (TIME Required) VITALS WERE TAKEN: T@8:00  (MAR 03, 1997@08:00)


   1      TPR
   2      TPR B/P
   3      TPR B/P, Ht and Wt.
   4      TPR, B/P and Wt.
   5      Temp, Detailed PR and B/P
   6      Detailed B/P and Associated Pulse
   7      Pulse
   8      Weight
   9      Circumference/Girth
   10     Pulse Oximetry
   11     CVP (Central Venous Pressure)
   12     User Configurable Combination
   13     Change Date/Time Taken
```

```
Select Vitals/Measurement Data Entry Option: 8  Weight
Vitals by (A)ll patients on a unit, (S)elected Rooms on unit, or (P)atient? A
Select Unit: 2AS
Begin entering patient vitals.

ANESMJS,ESTELL H            OK? YES// <RET>

To omit entering a vital/measurement reading:
Enter 'N' or 'n' for the value when NOT documenting a reason for omission.
Enter an * for the specific value when documenting the reason for omission.
Enter a single * to document that all measurements were omitted and the
 reason for omission.

Wt.: 400L


Qualifiers for WEIGHT:

 METHOD

 1 BED
 2 CHAIR
 3 STANDING

Select a number under each category (optional).
Separate the numbers with ',' : 2
  CHAIR

  Wt.: 400 LB  (181.82 KG) ACTUAL  CHAIR
Is this correct? YES// <RET>
```

The user continues to select the patients that have 8 am weight readings and exits when documentation is completed.

Menu Access:

The Vitals/Measurement Data Entry option is accessed through the Vitals/Measurement menu.

GMRV ERROR EDIT

Edit a Vitals/Measurement Entered in Error

Description:

This option allows users to correct errors in vitals/measurements. When data is edited, a new record is created, and the old record is marked entered in error. Vitals/measurements data is stored in the GMRV Vital Measurement (#120.5) file.

Additional Information:

Vitals/measurements data can be retrieved through the Print Vitals Entered in Error for a Patient option. The information entered through this option is also reflected in the Cumulative Vitals Report.

Menu Display:

```
Select OPTION NAME:  GMRVMGR             Vitals/Measurement

     1   Vitals/Measurement Data Entry ...
     2   Vitals/Measurements Results Reporting ...
     3   Edit a Vital/Measurement Entered in Error
     4   Vitals/Measurements Site Files Menu ...
```

Screen Prints:

```
Select Vitals/Measurement Option: 3  Edit a Vital/Measurement Entered in Error

Select PATIENT NAME: PARKER,PETER P.         08-04-18     931848807     SC
VETERAN
```

Answer with patient name.

```
Select DATE (TIME optional) of this error: T  (APR 04, 1993)
```

Enter an appropriate date. When the exact time is not remembered, the user may enter the date, and all entries for that date display.

```
CHOOSE FROM:

    1  APR  4, 1993@08:00
       BP: 120/80  (R ARM/LYING)
       T: 102.1 F (38.9 C)* (ORAL)
       R: 24 (SPONTANEOUS)
       P: 70  (RADIAL)
    2  APR  4, 1993@08:01
       BP: 130/85  (L ARM/LYING)
```

```
Select VITAL/MEASUREMENT from the above list: 1
```

Enter the number of the measurement or group of measurements you want to enter in error.

A detailed summary of the data is provided.

```
*** DATA TO BE ENTERED IN ERROR ***
APR  4, 1993@08:00
  BP:  120/80 R ARM/LYING
  T:   102.1 F (38.9 C)* ORAL
  R:   24 (SPONTANEOUS)
  P:   70 RADIAL

Select a VITAL in error reading, or press return to correct DATE/TIME, PATIENT
or set INVALID for the record: RESPIRATION
```

In this example, the respirations were incorrectly documented. The user must select an appropriate reason(s) from 1-4.

In this case, the invalid record selection (4) cannot be used in combination with 1, 2, or 3. The user receives the following prompt.

```
    1  INCORRECT DATE/TIME
    2  INCORRECT READING
    3  INCORRECT PATIENT
    4  INVALID VITAL/RECORD

   The INVALID RECORD reason cannot be used in combination with any
   other selections.
```

The following are examples of identifying incorrect patient data using the above four selections:

INCORRECT DATE/TIME: changes the date/time that a vital measurement was taken for a patient.

```
Select the reason(s) for entering this vital/measurement in error: 1
Enter new date/time vitals were taken: 9A  (APR 04, 1993@09:00)
```

INCORRECT READING: changes the data for a vital/measurement that was taken for a patient. The following prompt displays only if a single/specific vital has been identified for editing.

```
Select the reason(s) for entering this vital/measurement in error: 2

NEW RESPIRATION: 20A
..
```

The corrected information is entered.

INCORRECT PATIENT: changes the patient for a particular vital measurement (e.g., the data was entered for the wrong patient).

```
Select the reason(s) for entering this vital/measurement in error: 3
Select the NEW Patient's name: STARK,ANTHONY L.         01-19-25     589632111
   NSC VETERAN
```

INVALID RECORD: deletes the record without adding any new data. In actuality, the bad record is still in the computer, but is not a part of the current patient data.

```
Select the reason(s) for entering this vital/measurement in error: 4
```

If a combination of the above applies, choices can be selected at one time as described below.

```
Select PATIENT NAME: GEVFCC,MICHAEL E          03-22-22     541969342     NSC
VETERAN

Select DATE (TIME optional) of this error: T  (APR 04, 1993)
CHOOSE FROM:

    1  APR  4, 1993@08:00
       BP: 120/80
       T: 100.4 F (38.0 C)  (ORAL)
       R: 20 (SPONTANEOUS)
       P: 80  (RADIAL)
       HT: 5 FT 8 IN (172.72 CM)
       WT: 200 LB (90.91 KG)  (ACTUAL)

Select VITAL/MEASUREMENT from the above list: 1

*** DATA TO BE ENTERED IN ERROR ***
APR  4, 1993@08:00
  BP:  120/80
  T:  100.4 F (38.0 C) ORAL
  R:  20 (SPONTANEOUS)
  P:  80 RADIAL
  HT:  5 FT 8 IN (172.72 CM)
  WT:  200 LB (90.91 KG) ACTUAL

Select a VITAL in error reading, or press return to correct DATE/TIME, PATIENT
or set INVALID for the record: RESPIRATION

    1  INCORRECT DATE/TIME
    2  INCORRECT READING
    3  INCORRECT PATIENT
    4  INVALID VITAL/RECORD
Select the reason(s) for entering this vital/measurement in error: 1-3
Enter new date/time vitals were taken: 9A  (APR 04, 1993@09:00)

NEW RESPIRATION: 24A
Select the NEW Patient's name: STARK,ANTHONY L.         01-19-25     589632111
   NSC VETERAN
```

If multiple vital types are chosen, the reason for the INCORRECT READING is not displayed. All of the vital/measurements for a particular date/time are entered in error.

```
Select DATE (TIME optional) of this error: T  (APR 05, 1993)
CHOOSE FROM:

    1  APR  5, 1993@08:00
       BP: 130/80  (L ARM/LYING)
       T: 101.2 F (38.4 C)  (RECTAL)
       R: 20  (ASSISTED VENTILATOR)
       P: 80  (APICAL)

Select VITAL/MEASUREMENT from the above list: 1

*** DATA TO BE ENTERED IN ERROR ***
APR  5, 1993@08:00
  BP:  130/80 L ARM/LYING
  T:  101.2 F (38.4 C) RECTAL
  R:  20 ASSISTED VENTILATOR
  P:  80 APICAL

Select a VITAL in error reading, or press return to correct DATE/TIME, PATIENT
or set INVALID for the record: <RET>

    1  INCORRECT DATE/TIME
    2  INCORRECT PATIENT
    3  INVALID VITAL/RECORD
Select the reason(s) for entering these vital/measurements in error:
```

Menu Access:

The Edit a Vital/Measurement Entered in Error option is accessed through the Vitals/Measurement menu.

Chapter 5 Vitals/Measurements Reports

GMRV PRINT MENU

Vitals/Measurements Results Reporting

Description:

This menu contains options which allow the users to print various types of vitals/ measurements reports. Data printed on these reports is stored in the GMRV Vital Measurement (#120.5) file.

Additional Information:

Data printed in these reports was entered through the Vitals/Measurement Data Entry option, or the Edit a Vital/Measurement Entered in Error option. All abnormal patient values are identified on the vitals/measurements reports by an asterisk (*). Patient vital signs and measurements can be printed by patient, selected room and bed and by ward location (i.e., Hospital Location (#44) file). All vitals/measurements data for a patient is reflected on the Cumulative Vitals Report and the Vital Signs Record (SF 511) graphic report. The division name is obtained from the Hospital Location (#44) file.

Menu Display:

```
Select OPTION NAME:  GMRVMGR             Vitals/Measurement

     1   Vitals/Measurement Data Entry ...
     2   Vitals/Measurements Results Reporting ...
     3   Edit a Vital/Measurement Entered in Error
     4   Vitals/Measurements Site Files Menu ...

Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Menu Access:

The Vitals/Measurements Results Reporting option is accessed through the Vitals/Measurement menu.

GMRV SF511

V/M Graphic Reports

Description:

This option provides the user with 4 different reports, the first is a report simulating the Standard Form 511 - Vital Signs Record (Vital Flow Sheet), second is a B/P Plotting Chart, third is a Weight Chart, and last is a Pulse Oximetry/ Respiratory Graph. Patient information contained in this report is stored in the GMRV Vital Measurement (#120.5) file, and the GMRY Patient I/O (#126) file.

Additional Information:

The information printed in this report was entered through the Vitals/ Measurements and the GMRY Intake and Output applications. All 24 hours intake and output totals are in milliliters. Reports can be printed by selected patient, for all patients on a ward, and for patients in a specific hospital room/bed. Refer to Printer Issues in the Package Management section for additional information on setting up Kyocera F-800A and Hewlett-Packard LaserJet printers.

Note: When printing any of the graphic reports on a Kyocera printer, the percent sign for the oxygen concentration under pulse oximetry at the bottom of the graph is displayed as 0/0 instead of %.

Menu Display:

```
Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Screen Prints:

```
Select Vitals/Measurements Results Reporting Option: 1  V/M Graphic Reports

            1  Vital Signs Record
            2  B/P Plotting Chart
            3  Weight Chart
            4  Pulse Oximetry/Respiratory Graph

            Select a number between 1 and 4: 1  Vital Signs Record// <RET>

Vitals by (A)ll patients on a ward, (S)elected Rooms on ward, or (P)atient? P
```

Enter the patient's name.

```
Select PATIENT NAME:    STARK,ANTHONY L.       01-19-25     589632111     NSC
VETERAN
```

Enter appropriate start date.

```
Start DATE (TIME optional): T-7//1/1/97  (JAN 01, 1997)
```

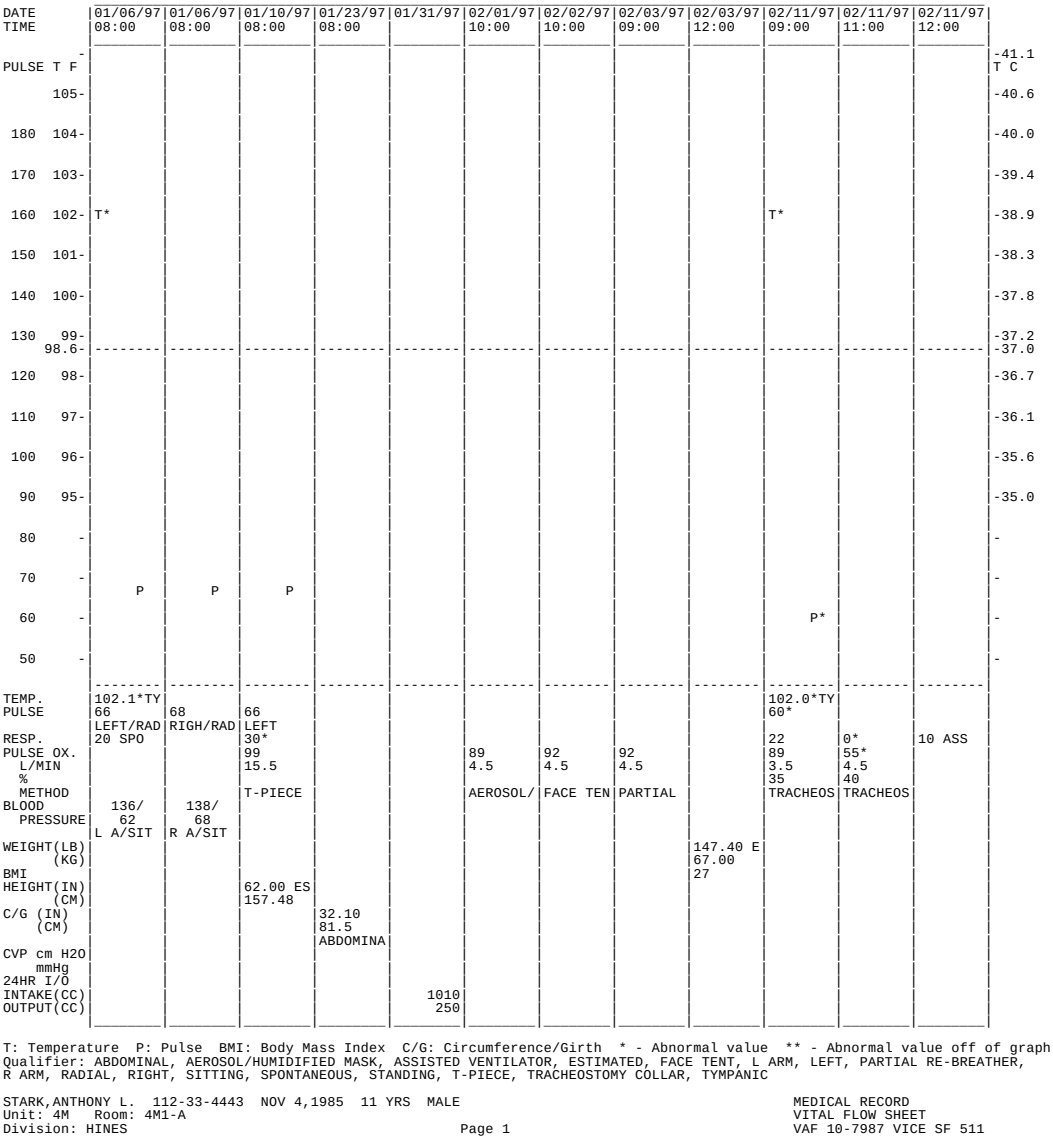
Enter appropriate end date.

```
Go to DATE (TIME optional): NOW// <RET> (FEB 25, 1997@10:02)
```

DEVICE: Enter appropriate response

This report must be queued to a line printer or sent to a slave printer with 132 columns.

The following is an example of an SF511 (Vital Signs Record) graph sent to a dot matrix printer:



DATE	01/06/97	01/06/97	01/10/97	01/23/97	01/31/97	02/01/97	02/02/97	02/03/97	02/03/97	02/11/97	02/11/97	02/11/97
TIME	08:00	08:00	08:00	08:00		10:00	10:00	09:00	12:00	09:00	11:00	12:00
PULSE T F												
105												
104												
103												
102	T*									T*		
101												
100												
99												
98.6												
98												
97												
96												
95												
	P	P	P							P*		
TEMP.	102.1*TY									102.0*TY		
PULSE	66 LEFT/RAD	68 RIGH/RAD	66 LEFT							60*		
RESP.	20 SPO		30*							22	0*	10 ASS
PULSE OX.			99			89	92	92		89	55*	
L/MIN			15.5			4.5	4.5	4.5		3.5	4.5	
%										35	40	
METHOD			T-PIECE			AEROSOL/	FACE TEN	PARTIAL		TRACHEOS	TRACHEOS	
BLOOD PRESSURE	136/ 62 L A/SIT	138/ 68 R A/SIT										
WEIGHT(LB)									147.40 E			
(KG)									67.00			
BMI									27			
HEIGHT(IN)			62.00 ES									
(CM)			157.48									
C/G (IN)				32.10								
(CM)				81.5								
				ABDOMINA								
CVP cm H2O												
mmHg												
24HR I/O												
INTAKE(CC)					1010							
OUTPUT(CC)					250							

T: Temperature P: Pulse BMI: Body Mass Index C/G: Circumference/Girth * - Abnormal value ** - Abnormal value off of graph
Qualifier: ABDOMINAL, AEROSOL/HUMIDIFIED MASK, ASSISTED VENTILATOR, ESTIMATED, FACE TENT, L ARM, LEFT, PARTIAL RE-BREATHER, R ARM, RADIAL, RIGHT, SITTING, SPONTANEOUS, STANDING, T-PIECE, TRACHEOSTOMY COLLAR, TYMPANIC

STARK,ANTHONY L. 112-33-4443 NOV 4,1985 11 YRS MALE
Unit: 4M Room: 4M1-A
Division: HINES

Page 1

MEDICAL RECORD
VITAL FLOW SHEET
VAF 10-7987 VICE SF 511

The following is an example of an SF511 (Vital Signs Record) graph sent to a Kyocera, HP Laser Jet 4, or HP Laser Jet 5 printer:

The following is an example of the B/P Plotting Chart, this report can only be sent to a Kyocera, HP Laser Jet 4, or HP Laser Jet 5 printer:

The following is an example of the Weight Chart, this report can only be sent to a Kyocera, HP Laser Jet 4, or HP Laser Jet 5 printer:

The following is an example of the Pulse Oximetry/Respiration Graph, this report can only be sent to a Kyocera, HP Laser Jet 4, or HP Laser Jet 5 printer:

Menu Access:

The V/M Graphic Reports option is accessed through the Vitals/Measurements Results Reporting option of the Vitals/Measurement menu.

GMRV DISPLAY V/M

Latest Vitals Display for a Patient

Description:

This option prints the latest vitals/measurements for an individual patient. Patient data is retrieved from the GMRV Vital Measurement (#120.5) file.

Additional Information:

Data displayed in this report is entered through the Vitals/Measurement Data Entry option, or the Edit a Vital/Measurement Entered in Error option.

Menu Display:

```
Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Screen Prints:

```
Select Vitals/Measurements Results Reporting Option: 2  Latest Vitals Display
for a Patient

Select PATIENT NAME:    STARK,ANTHONY L.       01-19-25     589632111     NSC
VETERAN

DEVICE: Enter appropriate response


MAR 25,1997 (11:21)         LATEST VITALS REPORT                        PAGE 1
------------------------------------------------------------------------------

4M1-A       STARK,ANTHONY L.      112-33-4443

Temp.:      (03/21/97@09:48) 99.4 F  (37.4 C)(ORAL)
Pulse:      (03/21/97@09:48) 55*(RADIAL)
Resp.:      (03/21/97@09:48) 20
Pulse Ox:   (03/21/97@09:48) 99% with supplemental O2 30% 3 l/min
                             - VENTURI MASK
B/P:        (03/13/97@09:28) 120/80
Ht.:        (03/20/97@10:39) 2 ft 10 in (86.36 cm)
Wt.:        (03/20/97@10:39) 500 lb  (227.27 kg)(ACTUAL, BED)
BMI:                         305*
CVP:        (03/21/97@09:48) 24 cmH2O (17.6 mmHg)
Circ/Girth: (01/23/97@08)    32.1 in (81.53 cm)(ABDOMINAL)
```

```
Press return to continue <RET>
```

Menu Access:

The Latest Vitals Display for a Patient option is accessed through the Vitals/ Measurements Results Reporting option of the Vitals/Measurement menu.

GMRV V/M BY LOCATION

Latest Vitals by Location

Description:

This option prints the latest vitals/measurements for all patients on a specific ward. Vitals data for a patient is stored in the GMRV Vital Measurement (#120.5) file.

Additional Information:

Data printed in this report is entered through the Vitals/Measurement Data Entry option, or the Edit a Vital/Measurement Entered in Error option.

Menu Display:

```
Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Screen Prints:

```
Select Vitals/Measurements Results Reporting Option: 3  Latest Vitals by
Location

Select WARD LOCATION NAME:    MICU
```

Enter appropriate ward name.

```
DEVICE:
```
Enter appropriate response

```
MAR 25,1997 (11:22) VITALS REPORT FOR UNIT: MICU - HINES, IL            PAGE 1
------------------------------------------------------------------------------

            TRAMG,HENRY           793-13-3012

Temp.:      (03/20/97@1)     99.6 F  (37.6 C)(ORAL)
Pulse:      (03/20/97@1)     88(RADIAL)
Resp.:      (03/20/97@1)     24
B/P:        (07/17/96@14:58) 120/80


Press return to continue or "^" to quit <RET>
```

```
MAR 25,1997 (11:22) VITALS REPORT FOR UNIT: MICU - HINES, IL            PAGE 2
------------------------------------------------------------------------------

500-1       PARKER,PETER P.

Temp.:      (03/20/97@1)     100 F  (37.8 C)(ORAL)
Pulse:      (03/20/97@1)     55*(RADIAL)
Resp.:      (03/20/97@1)     20
Pulse Ox:   (02/20/97@07)    89% with supplemental O2 40% 3.5 l/min
                             - AEROSOL/HUMIDIFIED MASK
B/P:        (02/21/97@14:17) 120/70(L ARM, LYING, CUFF)
Ht.:        (02/20/97@08)    6 ft  (182.88 cm)(ESTIMATED)
Wt.:        (02/20/97@08)    200 lb  (90.91 kg)
BMI:                         27
CVP:        (02/21/97@14:28) 19.04 cmH2O (14.0 mmHg)
Circ/Girth: (02/21/97@14:28) 32.25 in (81.92 cm)(THIGH)

Press return to continue <RET>
```

Menu Access:

The Latest Vitals by Location option is accessed through the Vitals/Measurements Results Reporting option of the Vitals/Measurement menu.

GMRV CUMULATIVE V/M

Cumulative Vitals Report

Description:

This option prints vitals/measurement information for patients over a user specified period of time. Data comes from the GMRV Vital Measurement (#120.5) file.

Additional Information:

Data printed in the reports is entered into the database through the Vitals/ Measurement Data Entry option, or the Edit a Vital/Measurement Entered in Error option. Reports can be printed by individual patient, for all patients on a ward, or for patients in a specific hospital room/bed.

Restrictions:

Data prints in chronological order.

Menu Display:

```
Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Screen Prints:

```
Select Vitals/Measurements Results Reporting Option: 4  Cumulative Vitals
Report
```

Print by patient.

```
Vitals by (A)ll patients on a ward, (S)elected Rooms on ward, or (P)atient? P

Select PATIENT NAME:    STARK,ANTHONY L.       01-19-25     589632111     NSC
VETERAN
```

Enter patient name.

```
Start with DATE (TIME optional): JAN 3,1993@10:00//1/1/95  (JAN 01, 1995)
```

Enter an appropriate beginning date for this report. The default date is the date of admission for inpatients or T-7 for outpatients.

```
Go to DATE (TIME optional): NOW// <RET> (FEB 25, 1997@09:46)
```

Enter appropriate ending date for this report.

```
DEVICE: Enter appropriate response
```

```
FEB 25, 1997 (10:52)     Cumulative Vitals/Measurements Report        Page 1

------------------------------------------------------------------------------
07/05/95
14:00
    T:   97.7 F (36.5 C)  (ORAL)
    P:   89  (RADIAL)
    R:   20
    B/P: 145/90  (R ARM, SITTING)
    Ht:  72.00 in (182.88 cm)
    Wt:  225.00 lb (102.27 kg)
    Body Mass Index: 31*
06/18/96
08:00
    P:   62  (RADIAL)
    R:   20
    B/P: 122/68  (R ARM, SITTING)
08:01
    B/P: 102/60* (L ARM, SITTING)
08:02
    B/P: 100/60* (R ARM, STANDING)
08:03
    B/P: 120/70  (L ARM, STANDING)
08:04
    B/P: 110/60* (R ARM, LYING)
08:05
    B/P: 110/70  (L ARM, LYING)
02/17/97
08:00
    T:   99.0 F (37.2 C)  (ORAL)
    P:   75  (LEFT, RADIAL, PALPATED, SITTING)
    R:   14  (SITTING)
    B/P: 120/70  (L ARM)
    Ht:  72.00 in (182.88 cm)
    Wt:  200.00 lb (90.91 kg) (ACTUAL, STANDING)
    Body Mass Index: 27
    Pulse Ox.: 92 % with supplemental O2 03 l/min
         via MASK
02/19/97
14:00
    T:   98.7 F (37.1 C)  (ORAL)
    P:   70  (LEFT, RADIAL)
    R:   20  (STANDING)
    B/P: 120/60* (L ARM, STANDING)
    Ht:  72.00 in (182.88 cm)
    Wt:  205.00 lb (93.18 kg) (ACTUAL, STANDING)
    Body Mass Index: 28*
    Pulse Ox.: 98 % with supplemental O2 04 l/min
         via MASK
```

The following legend is printed on the bottom of the report.

```
*** (E) - Error entry

STARK,ANTHONY L  112-33-4443  NOV 4,1985   11 YRS  MALE          VAF 10-7987j
Unit: 4E                        Room: 500-3
Division: Hines
```

Menu Access:

The Cumulative Vitals Report option is accessed through the Vitals/Measurements Results Reporting option of the Vitals/Measurement menu.

GMRV ERROR REPORT

Print Vitals Entered in Error for a Patient

Description:

This option prints a report of all vitals/measurements entered in error for a particular patient for a specific date range. Data comes from the GMRV Vital Measurement (#120.5) file.

Additional Information:

Patient information printed in this report was entered into the database through the Edit a Vital/Measurement Entered in Error option.

Menu Display:

```
Select Vitals/Measurement Option: 2  Vitals/Measurements Results Reporting


   1      V/M Graphic Reports
   2      Latest Vitals Display for a Patient
   3      Latest Vitals by Location
   4      Cumulative Vitals Report
   5      Print Vitals Entered in Error for a Patient
```

Screen Prints:

```
Select Vitals/Measurements Results Reporting Option: 5  Print Vitals Entered
in Error for a Patient
Select PATIENT NAME: STARK,ANTHONY L.        01-19-25      589632111
```

Enter patient name.

```
Start with DATE (TIME optional): T-7//1/1/95  (JAN 01, 1995)
```

Enter appropriate start date.

```
go to DATE (TIME optional): NOW// <RET> (FEB 25, 1997@12:37)
```

Enter appropriate end date.

```
DEVICE: HOME//
```
Enter appropriate response

```
FEB 25,1997 (11:00)   ENTERED IN ERROR VITAL/MEASUREMENT REPORT       PAGE 1
Patient: STARK,ANTHONY L.     112-33-4443

Date Vit./Meas. taken                                          User who made error
-------------------------------------------------------------------------------

FEB 25, 1997@06:30   TEMPERATURE                               WYMAN,SANDRA
   Reason: incorrect reading
   (Revised)  102.1 F  (38.9 C)* (ORAL)
   (Bad data)  99 F  (37.2 C) (ORAL)

FEB 25, 1997@06:30   TEMPERATURE
   Reason: incorrect reading
   (Revised)  102.1 F  (38.9 C)* (ORAL)
   (Bad data)  102 F  (38.9 C)* (ORAL)
```

Data might not appear in the Revised Data column under certain conditions, for example, when original data was associated with another patient.

Menu Access:

The Print Vitals Entered in Error for a Patient option is accessed through the Vitals/Measurements Results Reporting option of the Vitals/Measurement menu.

Glossary

Access Code A unique sequence of characters known by and assigned only to the user, the system manager and/or designated alternate(s). The access code (in conjunction with the verify code) is used by the computer to identify authorized users.

Administration Schedule This is a common abbreviation for a schedule. A schedule is the frequency for which an action is to take place, such as every eight hours (Q8H) or every other day (QOD).

ADP Coordinator/ADPAC/Application Coordinator Automated Data Processing Application Coordinator. The person responsible for implementing a set of computer programs (application package) developed to support a specific functional area such as nursing, PIMS, etc.

Application A system of computer programs and files that have been specifically developed to meet the requirements of a user or group of users. Examples of VISTA applications are the PIMS and Vitals/Measurements application.

Archive The process of moving data to some other storage medium, usually a magnetic tape, and deleting the information from active storage in order to free-up disk space on the system.

Audit Trail/Logging Features The use of automated software procedures to determine if the security controls implemented for protection of computer systems are being circumvented and to identify the potential source of the security breach.

Backup Procedures The provisions made for the recovery of data files and program libraries and for restart or replacement of ADP equipment after the occurrence of a system failure.

Baud Rate The rate at which data is being transmitted or received from a computer. The baud rate is equivalent to the number of characters per second times 10.

Block The unit of storage transferred to and from disk drives, typically 512, 1024, or 2048 bytes (characters).

Boot The process of starting up the computer.

BMI This is the patient's body mass index, which is calculated by dividing the person's weight in kilograms by the square of his height in meters.

Bulletin A canned message that is automatically sent by MailMan to a user when something happens to the database.

Byte A unit of computer space usually equivalent to one character.

CIOFO Chief Information Office Field Office, formerly known as Information Resource Management Field Office, and Information Systems Center.

Contingency Plan A plan which assigns responsibility and defines procedures for use of the backup/restart/recovery and emergency preparedness procedures selected for the computer system based on risk analysis for that system.

CORE A collection of VA developed programs (specific to PIMS, Pharmacy Service, and Laboratory Service) which is run at VA Medical Centers.

CPU Central Processing Unit, the heart of a computer system.

CRT Cathode Ray Tube, similar to a TV monitor but used in computer systems for viewing data. Also called a Video Display Terminal (VDT).

Cursor A visual position indicator (e.g., blinking rectangle or an underline) on a CRT that moves along with each character as it is entered from the keyboard.

Data Dictionary A description of file structure and data elements within a file.

Device A hardware input/output component of a computer system (e.g., CRT, printer).

Disk A magnetic storage device used to hold information.

Edit Used to change/modify data typically stored in a file.

Field A data element in a file.

File The M construct in which data is stored for retrieval at a later time. A computer record of related information (e.g., Patient file).

File Manager or FileMan Within this manual, FileManager or FileMan is a reference to VA FileMan. FileMan is a set of M routines used to enter, edit, print, and sort/ search related data in a file; a data base.

Focus Group Previously referred to as the Expert Panel, or SIUG (Special Interest User Group). A committee which advises programmers about the development of a particular system/package.

Global An M term used when referring to a file stored on a storage medium, usually a magnetic disk. In the Intake and Output software, for example, intake and output data is stored in one global, and patient data is stored in another global.

GMRV This signifies the General Medical Record namespace assigned to the Vitals/Measurements application.

GMRY This signifies the General Medical Record namespace assigned to the Intake and Output application.

Hardware The physical or mechanical components of a computer system such as CPU, CRT, disk drives, etc.

I&O Intake and output.

Intake/Output Type The type denotes from where the intake or output is derived, i.e., oral, intravenous, etc.

IRMS Information Resource Management Service.

IV Intravenously; by intravenous injection.

Kernel A set of software utilities. These utilities provide data processing support for the application packages developed within the VA. They are also tools used in configuring the local computer site to meet the particular needs of the hospital. The components of this operating system include: MenuMan, TaskMan, Device Handler, Log-on/Security, and other specialized routines.

Kilobyte More commonly known as Kbyte or "K". A measure of storage capacity equivalent to 1024 characters.

LAYGO An acronym for Learn As You Go. A technique used by VA FileMan to acquire new information as it goes about its normal procedure. It permits a user to add new data to a file.

M Formerly known as MUMPS or the Massachusetts (General Hospital) Utility Multi-Programming System. This is the programming language used to write all V*ISTA* applications.

MailMan An electronic mail, teleconferencing, and networking system.

Megabyte A measure of storage capacity; approximately 1 million characters. Abbreviated as Mbyte or Meg.

Memory A storage area used by the computer to hold information.

Menu A set of options or functions available to users for editing, formatting, generating reports, etc.

Menu Manager A part of the Kernel that allows each site to manage the various options or functions available to individual users.

ML Milliliters; a unit of volume used in the Intake and Output application.

Modem An electronic device which converts computer signals to enable transmission through a telephone.

Module A component of the nursing software application that covers a single topic or a small section of a broad topic.

Namespace A naming convention followed in the VA to identify various applications and to avoid duplication. It is used as a prefix for all routines and globals used by the application. The Intake and Output Package uses GMRY as its namespace.

Operating System The innermost layer of software that communicates with the hardware. It controls the overall operation of the computer such as assigning places in memory, processing input and output. One of its primary functions is interpreting M computer programs into language the system can understand.

Option A functionality that is invoked by the user. The information defined in the option is used to drive the menu system. Options are created, associated with others on menus, or given entry/exit actions. For example, the GMRVMGR is the main menu for the Vitals/Measurements application.

Package Otherwise known as an application. A set of M routines, files, documentation and installation procedures that support a specific function within V*IST*A (e.g., the ADT and Vitals/Measurements applications).

Password A protected word or string of characters that identifies or authenticates a user, a specific resource, or an access type (synonymous with Verify Code).

PIMS Patient Information Management System previously known as the MAS Package.

PO Per orum; refers to an item consumed orally or through the mouth.

Pointer A special data type of VA FileMan that takes its value from another file. This is a method of joining files together and avoiding duplication of information.

Port An outlet in the back of the computer into which terminals can be connected.

Printer A device for printing (on paper) data which is processed by a computer system.

Program A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

Protocol A single entry point referencing multiple routine entry points to execute several inter related, required processes which perform specific functions. When multiple protocols are associated with a single procedure (i.e., intravenous lines or IV lines), they are found grouped under a single option.

Qualifier A word that gives a more detailed description of an item.

Queuing The scheduling of a process/task to occur at a later time. Queuing is normally done if a task uses up a lot of computer resources.

Response Time The average amount of time the user must wait between the time the user responded to a question at the terminal and the time the system responds by displaying data and/or the next question.

Restart/Recovery Procedures The actions necessary to restore a system's data files and computational capability after a system failure or penetration.

<RET> Carriage return.

Routine A set of M commands and arguments, created, stored, and retrieved as a single unit in M.

Risk Analysis An analysis of system assets and vulnerabilities to establish an expected loss from certain events based on estimated probabilities of the occurrence of such events.

Security Key A function which unlocks specific options and makes them accessible to an authorized user.

Security System A part of Kernel that controls user access to the various computer applications. When a user signs-on, the security system determines the privileges of the user, assigns security keys, tracks usage, and controls the menus or options the user may access. It operates in conjunction with MenuMan.

Sensitive Information Any information which requires a degree of protection and which should be made available only to authorized users.

Service Position A term used to categorize employees based on job descriptions. Examples of service positions are: staff nurse, LPN 5, NA 4, supervisor, clerk typist, etc.

Site Configurable A term used to refer to features in the system that can be modified to meet the needs of each site.

Software A generic term referring to a related set of computer programs. Generally, this refers to an operating system that enables user programs to run.

Subroutine A part of a program which performs a single function.

Task Manager or TaskMan A part of Kernel which allows programs or functions to begin at specified times or when devices become available. See Queuing.

Telecommunications Any transmission, emission, or reception of signs, signals, writing, images, sounds or other information by wire, radio, visual, or any electromagnetic system.

Terminal A device used to send and receive data from a computer system (i.e., keyboard and CRT, or printer with a keyboard).

UCI User Class Identifier. The major delimiter of information structure within the operating system.

User A person who enters and/or retrieves data in a system, usually utilizing a CRT.

Utility An M program that assists in the development and/or maintenance of a computer system.

VDT Video Display Terminal. Also called a Cathode Ray Tube (CRT).

Verify Code A unique security code which serves as a second level of security access. Use of this code is site specific; sometimes used interchangeably with a password.

V*IST*A Veterans Health Information Systems and Technology Architecture.

Vital Type A category of vital sign or measurement (e.g., pulse, respiration, blood pressure, temperature).

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